2018 NFIRS FILES
Data Quality Notes

These notes reflect only fire and hazmat incidents.

Basic Incident File

1) **STATE –** There are five records reported from 'AS' (American Samoa).
2) **INC_NO** – There are records with negative values and hyphens in INC_NO. There are also incident numbers with character values. The NFIRS Complete Reference Guide (CRG) states that the INC_NO is numeric only.
3) **INC_TYPE** – There are 513 records with INC_TYPE='110' (4.1 conversion code).
4) **ARRIVAL** – There are 44 records with an arrival date of 2019; 43 of these records have a date of 1/01/2019 (continue into the new year) and one record has a date of 12/31/2019.
5) **INC_CONT –** There are 34 records with an incident controlled date of 2019 (30 of these records have a date of 1/01/2019 – continue into the new year); two records with a date of 2020; one record with a date of 3201.
6) **LU_CLEAR** – There are 272 records with a last unit cleared date of 2019 (251 of these records have a date of 1/01/2019 – continue into the new year); four records with a date of 2020; one record with a date of 2021; three records with a date of 2108; one record with a date of 2201; one record with a date of 3201; and one record with a date of 5018.
7) **ALARMS** – This field contains many character values (ALARMS is the actual number of alarms transmitted for the incident).
8) **ACT_TAK1—**There are 63 records with a value of 'UU' (not a CRG option); there are five records with a missing value (required field).
9) **ACT_TAK2—**There are 6,711 records with a value of '-'. There is one record with a value of '02'. There are three records with a value of '29'. There are two records with a value of '49'. There is one record with a value of '88'. There is one record with a value of 'In'. (Not CRG options).
10) **ACT_TAK3—**There are 382 records with the value of '-'. There is one record with a value of '25'. There is one record with a value of '49'. There are three records with a value of '88'. (Not CRG options).
11) **THREE ACT_TAK FIELDS—**
    - There are 1,358 records where ACT_TAK1 equals ACT_TAK2.
    - There are 382 records where ACT_TAK1 equals ACT_TAK3.
    - There are 544 records where ACT_TAK2 equals ACT_TAK3.
    - There are 95 records where all three ACT_TAK values are equal.
12) **SUP_APP, EMS_APP, OTH_APP**—there are some records with thousands of apparatus that responded. For **EMS_APP,** there is one record with a value of -1.
13) **SUP_PER, EMS_PER, OTH_PER**—for each of these fields there are several records with extremely high values of personnel. For **SUP_PER,** there is one record with a value of -1.
14) **PROP_LOSS**— There is one record with a property loss value of -$800. There are two records with a content loss value of -$1. There are five records with property loss values of $100,000,000 or more. Three of these records have a reported loss of $999,999,999.

15) **CONT_LOSS**— There is one record with a content loss value of -$800. There is one record with a content loss value of -$500. There is one record with a content loss value of -$1. There are four records with a reported contents loss of $100,000,000 or more. Three of these records have a reported loss of $999,999,999.
16) **PROP_VAL –** There is one record with a value of -$1. There are nine records with a value of $999,999,999.
17) **CONT_VAL –** There is one record with a value of -$1. There are three records with a value of $999,999,999.
18) **FF_DEATH—**although this is a required field, there are 22,950 records with a missing value (all other records have a value of 0 or 1).
19) **OTH_DEATH**—although this is a required field, there are 2,238,712 records with a missing value (all other records have a value of 0 to 9).
20) **FF_INJ—**although this is a required field, there are 22,950 records with a missing value (all other records have a value of 0 to 34).
21) **OTH_INJ**—although this is a required field, there are 2,238,712 records with a missing value (all other records have a value of 0 to 22).
22) **DET_ALERT—**there are 8,974 confined fire incident records that have a missing value (CRG indicates this is a required field for confined fires).
23) **PROP_USE**—although a required field, there are 173,301 records with a missing value. *All of these incidents have AID = 3, 4 so this is expected.* There are 16 incidents with a value of '250' (not a valid value in the CRG).
24) **CENSUS**-there are records with data that do not appear to be census tracts.

Basic Incident Address File

1) **INC_NO –** There are records with negative values and hyphens in INC_NO. There are also incident numbers with character values. The CRG states that the INC_NO is numeric only.
2) **NUM_MILE –** There are records with street names, street types, and apartment numbers in this field.
3) The **STREETNAME** field includes records with entire street addresses with house numbers, street types, and city names.
4) There are street names, city names, etc. entered in the **APT_NO** field.
5) **CITY** - There are numbers, street addresses, zip codes, etc. in this field.
6) **STATE_ID** - There are three records with a value of 'TR' (invalid value; not a CRG option).
7) **ZIP5** includes invalid zip codes (some are less than 5 digits, include character values, etc.).
8) **ZIP4** includes invalid zip codes (some are less than 4 digits, include character values, etc.).

Basic Incident Aid Given or Received File

1) **INC_NO** – There are records with negative values and hyphens in INC_NO. There are also incident numbers with character values. The CRG states that the INC_NO is numeric only.
2) **FDIDRECAID** - There are at least 1,591 records with invalid FDIDs.
3) **FDIDSTREC** - There is one record with a value of 'TR' (invalid value; not a CRG option).
4) **INC_NOFDID** – There are records that have bad incident numbers (e.g., unkno, no idea, not sur). This field should contain numeric values only.

Fire Incident File

1) **NUM_UNIT—**there are 540 records that have a value of -1 and 330,362 that have a 0 value. There are two records that have a value of 9999.
2) **BLDG_INVOL—**there are 572 records that have a value of -1. There are two records with a value of 999.
3) **ACRES_BURN—**there are 49 records with a value of -1.
4) **ON_SITE_M2-**there is one record where ON_SITE_M2 has a value of '800' (not a CRG option).
5) **On_SITE_M3-**there is one record where ON-SITE_M2 has a value of '800' (not a CRG option).
6) **FACT_IGN_1—**there one record with a missing value where the INC_TYPE=111 and there are two records with a missing value where the INC_TYPE=140 (a required field for these incident types)
7) **FACT_IGN_1 & 2—**there are 28 records where FACT_IGN_1 is equal to FACT_IGN_2.
8) **HUM_FACT_8**—there are no records with values of '8'.
9) **AGE—**there is one record with a value of 800.
10) **MOB_MAKE—**there are 25 records with a value of 'HE' (not a CRG option).
11) **EQ_BRAND –** there are some records with numeric values instead of brand names.
12) **EQ_SER_NO –** there are 114 records with values of zero(s); there are records with 'unknown' responses.
13) **BLDG_ABOVE**—there are 29 records with stories above 200 (seven of these records have a value of 999).
14) **BLDG_BELOW**—there are 47 records with value of -1; there are 43 records with stories below grade of 30 or more (13 of these records have a value of 99).
15) **BLDG_LGTH** – there are 750 records with a value of 0.
16) **BLDG_WIDTH** – there are 754 records with a value of 0; there is one record with a value of 1E4; there is one record with a value of 18E4.
17) **TOT_SQ_FT**— there are 4,519 records with a value of 0.
18) **FIRE_ORIG—** there is one record with a value of ***; there are 59 records with values greater than 99 **(**four of these have a value of 999).
19) **ST_DAM_MIN, ST_DAM_SIG, ST_DAM_HVY—**there are a couple of records in these fields with negative values.
20) **ITEM_SPRD—**there are 504 records with a value of '99' (not a CRG option).
21) **MAT_SPRD**—there are six records with a value of '28' and there are 1,556 records with a value of '99' (not CRG options).

Civilian Fire Casualty File

1) **AGE—**there are 32 records where age is greater than 105 (this includes two records with an age of 999); there are 220 records where age is 0.
2) **AFFILIAT –** there is one record with a value of 'U' (not a CRG option).
3) **INJ_DT_TIM—**there are eight records that have a year of 2017; one with 1970; one with 1983; one with 1999, three with 2000, two with 2008, and one with 2015.
4) **FACT_INJ1—**there are seven records with a value of 'UU' (not a CRG option).
5) **FACT_INJ2—**there is one record with a value of 'UU' (not a CRG option).
6) **FACT_INJ3—**there are two records with a value of 'UU' (not a CRG option).
7) **FACT_INJ fields:**
   - There are 10 records where FACT_INJ1=FACT_INJ2.
   - There is one record where FACT_INJ2=FACT_INJ3.
   - There is one record where FACT_INJ1=FACT_INJ3.
8) **PRIM_SYMP—**there are 54 records with a value of 'NN' (not a CRG option).
9) **BODY_PART—**there are 10 records with a value of '0'; there are three records with a value of 'U' (not CRG options).
10) **CC_DISPOS**—there are 115 records with a value of 'N' (while the rest of the records where CC_DISPOS was reported have a value of '1').

Fire Service Casualty File

1) **AGE—**there are 91 records with a value of 0; there are 60 records with an age ranging from 1 to 9; there are five records with an age over 90 (one of these has an age of 106).
2) **SYMPTOM**—there are 428 records with a value of 'NN' (not a CRG option).
3) **PABI** – there is one record with a value of '30'; there are four records with a value of '60' (not CRG options).
4) **LOCATION**—there are 19 records with a value of 'NN' (not a CRG option).

Fire Service Equipment Failure File

EQP_PROB—there are three records with a value of 'NN' (not a CRG option).

Wildland Fire File

1) **TOWNSHIP** – there are 18 records with a value less than 1; there are 94 records with a value greater than 36.
2) **SECTION –** there is one record with a value of 0; there one record with a value greater than 36 (i.e., 71).
3) **HUM_FACT8** – this field consists of only null values.
4) **FACT_IGN fields—**There are 10 records where **FACT_IGN1** equals **FACT_IGN2**.
5) **SUPP_FACT1** – There are two records where SUPP_FACT1=SUPP_FACT2.
6) **EQ_INV_IGN** – There are two records with a value of '877' (not a CRG option).
7) **NFDRS_ID** – there are records that have invalid values as they contain less than six digits in the id number and contain character values; CRG specifies a six-digit ID number.
8) **WIND_SPEED** – there is one record with a value of 510 mph.
9) **AIR_TEMP** – there are four records with large negative values ranging from -54 to -88. There is one record with a value of 7E3.
10) **REL_HUMID**—there are two records with a relative humidity of over 100 percent (i.e., 230 and 369).
11) **FUEL_MOIST**— fuel moisture generally ranges from 0 to 25 percent; there are 200 values ranging from 26 to 99.
12) **FED_CODE**— there are a number of records with federal agency codes that do not match ones that are offered on the list in the CRG (e.g., some with numeric values and others with less than five character values, etc.).
13) **BLDG_THR** – there are two records with a value of 999.
14) **CROP_BURN1, CROP_BURN2, CROP_BURN3 –** there are some records with numerical values in these fields as opposed to listing the type(s) of crops. There are 83 incidents where CROP_BURN1=CROP_BURN2; 82 incidents where CROP_BURN1=CROP_BURN3; 82 incidents where CROP_BURN2=CROP_BURN3; and 82 incidents where CROP_BURN1=CROP_BURN2=CROP_BURN3.
15) **AGE—**there are 12,713 records with an age of 0; there is one record with an age value of 500; there are three records with a value of 999.
16) **HORIZ_DIS –** there is one record with a negative value.
17) **FLAME_LGTH –** there are 15,157 records with a value of 0.
18) **SPREAD_RAT –** there is one record with a negative value; 15,523 records with a value of 0; and two records with a value of 999.

EMS File

1) **ARRIVAL –** There is one record where the date is 2/17/2019.
2) **TRANSPORT –** There are two records where the date is 2/17/2019.
3) **SITE_INJ1—**there are 7 records with a value of 'N' (not a CRG option).
4) There are 23 records where **SITE_INJ1=SITE_INJ2**; there are 10 records where **SITE_INJ1 = SITE_INJ3**; there are 3 records where **SITE_INJ1=SITE_INJ4**; there are 2 records where **SITE_INJ1=SITE_INJ5**; there are 11 records where **SITE_INJ2=SITE_INJ3**; there are 6 records where **SITE_INJ2=SITE_INJ4**; there are 4 records where **SITE_INJ2=SITE_INJ5**; there are 9 records where **SITE_INJ3=SITE_INJ4**; there are 5 records where **SITE_INJ3=SITE_INJ5**; and there are 7 records where **SITE_INJ4=SITE_INJ5**.
5) **PROC_USE2, PROC_USE6, PROC_USE19, PROC_USE20, and PROC_USE21 –** these fields contain all null values.
6) **SAFE_EQP6, SAFE_EQP7,** and **SAFE_EQP8** – these fields contain all null values. Additionally, there are no values of 'N' in the first field **SAFE_EQP1**.
7) **ARR_DES1** – includes values 1 and 2 for both descriptors. The **ARR_DES2** field contains all null values.
8) **IL_CARE—**there are 1,366 records with missing values (required field).

Hazardous Material File

1) **REL_STORY—**there is one record with a value of 500. Of 4,958 records that recorded 'outside of structure' (value of '2') in the REL_FROM field, 3,139 records have a numeric value in the REL_STORY field (although 2,860 of these have a value of 0).
2) **AFFEC_UNIT—**there are 9,405 records with a numeric value in the AFFEC_MEAS field. Of these, only 5,593 records contained a value in the AFFEC_UNIT field that actually defines the unit of measurement.
3) **EVAC_UNIT—**there are 5,820 records with a numeric value in EVAC_MEAS field. Of these, only 1,583 records contained a value in the EVAC_UNIT that actually defines the unit of measurement.
4) **CAUSE_REL—**there are 1,071 records with a missing value (required field).

Hazardous Material Chemical File

1) **UN_NUMBER**—there are ten records with a value of 0; there are several records with less than four digits (UN_NUMBER is a four-digit number); four records with a value of 'NA', 'CO', or 'PR'.
2) **DOT_CLASS** – there is one record with a value of '10'; three records with a value of '20'; one record with a value of '50'; and one record with a value of '90' (not CRG options).
3) **CAS_REGIS**—there are 24 records with a non-numeric value.
4) **CHEM_NAME**—there are 1,168 records with missing values (required field); there are also many records with a numeric value.
5) **CAP_UNIT**—of the 6,317 records with a value in the CONT_CAP field, there are 4,098 records with a blank CAP_UNIT field.
6) **AMOUNT_REL**—there are two records with a negative value; there are 1,522 records with missing values (required field).
7) **UNITS_REL**—of the 7,831 records with values in the AMOUNT_REL field, there are 411 records with a blank UNITS_REL field.

Hazardous Material Mobile Property Type File

MP_YEAR—there are five records with a value of -1; there are 11 records with a value of 0; there is one record with a value of 250.

Hazardous Material Equipment Involved File

EQ_YEAR—There are five records with a value of -1; there are 12 records with a value of 0.

Arson File

1) There are four records where **MOT_FACTS1 = MOT_FACTS2**; there is one record where **MOT_FACTS1 = MOT_FACTS3**; there is one record where **MOT_FACTS2** = **MOT_FACTS3**; and one record where **MOT_FACTS1 = MOT_FACTS2 = MOT_FACTS3.**
2) **GRP_INVOL2** and **GRP_INVOL3** contain all null values.

Arson Juvenile Subject File

1) There are 1,022 records where **AGE**=0. There are 1,871 records where AGE values are greater than 17 in the **AGE** field. AGE should only be filled out on the juvenile firesetter module if the person involved in ignition was under age 18. There is one record where **AGE** is 118 and one record where **AGE** is 119.
2) **RISK_FACT1** – there are 51 records with value of 'Z' (not a CRG option).

Arson Agency File

1) **AGENCY_NAM –** there are some records with invalid agency names (e.g., 'xxxxxxxxxxxxxxxxx').
2) **AG_ST_NUM –** there are a few records with street addresses in this field (e.g., '40 East,' '650 Colt,' '6th').
3) **AG_STREET** – there are records that include the street number in the street name field as well as the full street address (e.g., SW 18th ST SW Douglas AVE; 6410 State Park Rd).
4) **AG_APT_NO** – there are records with PO Box numbers and Floor numbers.
5) **AG_CITY**—there are five records that have a street address rather than a city and several records with a zip code.
6) **AG_ZIP5 –** there is one record with a zip code of '00000' (not a valid zip code).
7) **AG_ZIP4** – there are some invalid zip4 values; two that start with a '-' and one zip4 that is '0'.
8) **AG_PHONE** – there are 63 records where the phone number contains all zero values. There are several records with incomplete phone numbers.
9) **AG_CASE_NO** – there are 465 records where the case numbers contain all zero values; there are records with responses containing character values rather than numeric case numbers.
10) **AG_ORI** – there are some records that have state names and state abbreviations in this field.
11) **AG_FDID** – there are 29 records with all zero values in this field.

Fire Department Header File

1) **STATE** –there is one record with a state code of 'US'.
2) **FD_NAME** – this field contains some records that are numbers or fdids; some appear to be addresses.
3) **FD_STR_NO** – there are some records that contain 'PO BOX' in the street number field and other invalid street numbers.
4) **FD_STREET** – there are records that include the street number in the street name field as well as the full street address. There are also records that include 'PO BOX' in this field.
5) **FD_STR_TYP**—there is one record with a value of '30'; there is one record with a value of 'AVEN' (not valid in CRG); there are other records with invalid street type codes (e.g., 'Rice', 'Roas').
6) **FD_CITY**—there are a few records with number values or street addresses.
7) **FD_ZIP**—there are 124 records with zip code values of zero/zeroes; there is one record with a zip code of '99999' (not valid zip codes).
8) **FD_PHONE**—there are at least 121 records with invalid phone numbers; others are incomplete or include character values.
9) **FD_FAX**—similar issues as seen with FD_PHONE field.
10) **FD_EMAIL** – email addresses appear to be invalid (contain no @ symbols or periods).
11) **FD_FIP_CTY** – there are records with invalid values for the FIPS County Code; some of the codes are less than three digits and include character values. FIPS County Codes are numeric.
12) **NO_PD_FF** – there are three records with a value of 9999.
13) **NO_VOL_FF –** there are nine records with a value of 1000 or more.
14) **NO_VOL_PDC** – there are 15 records with a value greater than 500.